



Global partner in master alloys



Adding excellence to your alloying



Company profile

A PARTNER WITH A SOUND HISTORIC BACKGROUND

You can rely on a strong organisation

KBM Affilips' company history bears remarkable resemblance to the alloys we produce. The past forty years have been marked by constant developments in which knowledge, experience and skills in various disciplines were expertly forged to form an organisation as strong as steel. Starting in 1961, Affilips in Tienen has built an excellent reputation as a manufacturer of aluminium-, copper-, nickel- and lead-based master alloys. Its extensive use of recycled raw materials, in suitable applications, presents both economic and environmental advantages. In more recent times, Affilips has developed into one of the world's most advanced specialists in the field of master alloys for the superalloy industry, where our customers' products are found in aircraft engines, nuclear reactors and other equally demanding applications. This extensive knowhow is also used to the benefit of other KBM Affilips products, ensuring a uniquely high quality range of master alloys.

A milestone in our history was the merger of Affilips and KBM Master Alloys (formerly known as Kawecki-Billiton Metaalindustrie). The latter has been a forerunner in the aluminium grain refiner business since 1962, and has performed pioneering work in this field of expertise. The merger resulted in a valuable mix of knowledge and experience within our organisation, and allowed KBM Affilips to assume a leading position in the world market for an extensive range of non-ferrous master alloys. Our company's development over the years explains why we can offer you the broadest product range and, as a result, total solutions. In choosing KBM Affilips you are opting for a partner with sound historic foundations.

A FORMIDABLE PARTNER

Fully committed to quality - without concessions

KBM Affilips was formed on 1st January 1994, soon after the merger of the two companies, and functions as the sales organisation for all the products made by our Tienen, Oss and Delfzijl plants. Every year we ship over 45,000 tons of master alloys to destinations throughout the world, an operation which involves approximately 300 employees in the areas of production, quality assurance, research & development, logistics, administration, and sales. When doing business with KBM Affilips, you are assured of master alloys that consistently meet the highest standards. This quality guarantee is maintained by an uncompromising total quality management system, supported by continuous product testing in our own modern laboratories. All our quality systems are third party certified to ISO 9001.



In 1989 our Delfzijl plant became the first master alloy producer to achieve this certification. This long experience of formal quality assurance procedures, and our firm commitment to the principle of continuous improvement, will ensure that we are well prepared to meet the requirements of the future. Our technical expertise enables us to adapt the properties of the master alloy to meet your exact requirements - not only in terms of composition, but also in form: waffle ingots, coiled rod, cut rod, powder, tablets and briquettes to name just a few examples. KBM Affilips were one of the first to introduce grain refiners in wire and castings and led the development of high concentration splatter type hardeners. Our highly acclaimed modifiers in rod form are another example of innovative product development tailored to satisfy the requirements of our customers.



PARTNERSHIP IN TAILORED LOGISTICS

Wherever you need it, we'll make sure it gets there on time

If you are looking for tailored logistics, you will find a strong team of fully experienced people at KBM Affilips who will deliver as agreed. It doesn't matter whether you require a just in time delivery or a 100 MT long term supply arrangement, your contact at KBM Affilips will see to the satisfactory conclusion of any transaction. All our factories are conveniently located just a short journey from the busy port of Rotterdam, so intercontinental shipment is almost as easy as distribution within Europe. This is just one more of the aspects that make it a pleasure doing business with KBM Affilips.

PARTNERSHIP WITH AN EYE TO THE FUTURE

Securing your future interests

Innovation and a sense of responsibility for the environment are two KBM Affilips characteristics from which you can benefit. Our research department is constantly improving existing products and developing new master alloys. Should you decide to change your manufacturing process, chances are that KBM Affilips has already developed the master alloy you require. Our ongoing investment in environmentally friendly production processes keeps us well ahead of current environmental legislation. Thus we can guarantee continuity, both now and for the years to come. In opting for KBM Affilips, you are opting for 100% security in your future master alloys requirements.



Aluminium based master alloys



Expert technical advice

The airliner that wings its way across the sky, the cans containing your favourite drink, car wheels and engine blocks, venetian blinds and the lithographic plates used to print these very words: our master alloys are used in these products and in countless others, all are subject to extremely high standards set by manufacturers, consumers and regulating bodies. If you require aluminium based master alloys, contact an organisation with decades of experience in this field, an organisation that can adapt its products to meet the requirements of your particular area of application, an organisation that can also give expert technical advice. That organisation is KBM Affilips. Thanks to our vast range of products, we can offer you every opportunity to select the ideal solution.

Master alloys and additives that provide the best results

KBM Affilips can supply a wide range of master alloys, both primary and secondary aluminium based. These alloys are usually divided into three distinct product groups known as grain refiners, modifiers and hardeners. Cooperation with KBM Affilips will enable you to profit from our years of experience in the use of the world's finest AlTiB for the grain refinement of aluminium, our superb AlB in the production of electrical conductor aluminium, our famous AlSr -including our rapidly dissolving AlSr coiled rod- for the modification of casting alloys, and various hardeners, such as AlMn, AlCr, AlTi, AlZr and AlSi, used to meet the required alloy specification. Whatever idea you wish to realise in aluminium, KBM Affilips can supply the master alloys and know how required to achieve the best results.



Copper based master alloys

Saving time and money



Copper master alloys deliver better performance than the corresponding pure metals. This is because copper master alloys dissolve more readily and at lower operating temperatures, thus saving you time and energy. Moreover, thanks to their significantly lower oxidation and/or evaporation rates, they show a higher and more predictable yield. As a result, you can reduce material usage and energy consumption while making a valuable contribution to the environment at the same time.

The product of forty years of experience

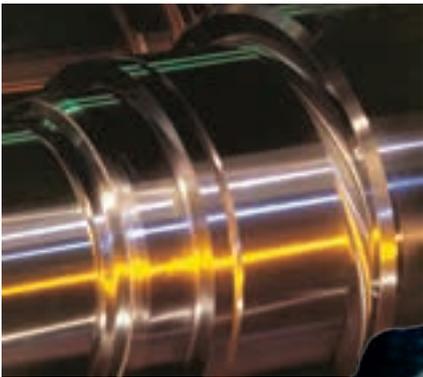
The copper hardeners and copper grain refiners supplied by KBM Affilips are found in a wide range of products. This includes bath and shower airconditioning systems, a vast range of extruded brass decorative items and fittings, printed circuit and even in the European coin: the euro. Specific applications are equally varied. CuCr, CuFe, CuTi, CuCo and CuZr are used in the production of low-alloyed copper for welding electrodes and thermal and electrical conductors. CuAs is used as a dezincification inhibitor for brass. KBM Affilips also manufactures copper master alloys for use as a deoxidising or desulphurising agent such as CuP, CuSi and CuMg for copper nickel alloys and CuB or CuLi for high-conductivity copper. Our range includes a variety of grain refiners for brasses and aluminium-bronzes, such as CuZr, CuB and CuAlB. With our forty years of experience in copper master alloys, KBM Affilips is sure to have a tailored solution for your application.



Nodularising alloys

An alternative worth considering

KBM Affilips NiMg and complex FeNiMg alloys are found in the rolls in strip mills, marine engine blocks, and innumerable other high-performance applications. If your organisation is actively involved in the manufacture of nodular iron, it may prove worthwhile to take a closer look at our wide range of nickel-magnesium and ferro-nickel-magnesium alloys. These products have been specially developed to achieve the most efficient introduction of magnesium into iron, and thanks to their superior magnesium recovery, they may prove a useful alternative to pure magnesium metal or low-density magnesium containing ferro-alloys.



More production flexibility, regardless of your production unit capacity

When examining our extensive range of nickel-magnesium and ferro-nickel-magnesium alloys, you will find that each individual alloy has a unique chemical composition, density and melting point. As to the form in which the master alloy is supplied, practically anything is possible, from the finest powder produced according to precision sieve analysis, to lumps of a few grams up to 10 kg according to specification. KBM Affilips can always supply the master alloy you require. This method of magnesium treatment can considerably reduce investment cost, lead to smoother production processes and substantial quality improvements, as well as offering all the advantages of a highly flexible production process. Furthermore, the use of nickel-magnesium and ferro-nickel-magnesium alloys is entirely independent of the size of your cast iron production unit.



Additives for the iron, steel and superalloy industries



An endless number of solutions for a highly demanding world

KBM Affilips manufactures a variety of additives for the iron, steel and superalloy industries. These products can be encountered in numerous, often extremely advanced, applications, such as industrial gas turbines, welding electrodes, turbochargers, aircraft engines, chemical plant equipment, afterburners, power plants, catalysts, prosthetic devices and marine engines. These special additives have been meticulously developed to improve the properties of your alloy, and to tailor them to the intended applications.



Additives that allow precise achievement of your goals

Our product range includes NiNb, NiMo, NiTa, and high purity FeNb; all principally used for alloying in nickel based superalloys. Another segment of our range is specifically intended for use as a deoxidising agent, desulphurising agent or nitrogen scavenger: NiMg and NiCa for cast iron, stainless steel and superalloys, and NiB for nickel based superalloys.

In addition, we supply additives specially developed improve the high temperature mechanical properties, corrosion resistance or machinability of the alloy to be treated. For example, NiCa in cast steel parts, NiB and NiTa in superalloys, and BiMn and TeMn in free-cutting steels. We can also supply a range of advanced additives for highly specific applications, such as NiB for wear resistance alloys, welding electrodes and powder metallurgy, FeZr for special cast irons, and NiZr as a grain refiner. No matter what your customers demand of your product, KBM Affilips supports you with solutions that will enable you to exceed the highest quality requirements.

Miscellaneous



A range of alloys for a variety of technologies and applications

The endurance of your car battery, the roofing sheet on your house, the astonishing speed at which millions of bytes are transferred within your computer, the chrome-plated manufacturer's insignia on your car. These are prime examples of KBM Affilips' behind-the-scenes contribution towards the advanced quality of products that millions of consumers use daily. It is worth considering whether KBM Affilips could be the right alloys partner for your product.

Lead based master alloys

We live in the age of growing mobility and we increasingly depend on the batteries that power all manner of equipment, including our vehicles. KBM Affilips also plays a vital role in the production of batteries for cars, aircraft, ships, submarines, etc. Our lead based master alloys, such as PbCa, PbSe and PbAs, contribute to the optimum performance of batteries. In addition, PbTe and PbSe are ideal for use as a grain refiner in soldering alloys and bearing alloys.



Zinc based master alloys

If you manufacture a product containing zinc, or carry out special processing, such as galvanising, you can be sure that KBM Affilips has the high quality master alloys and additives you require. Our extensive range includes, ZnFe, ZnAl, ZnNi, ZnMg and combinations with copper and titanium.

Research and development

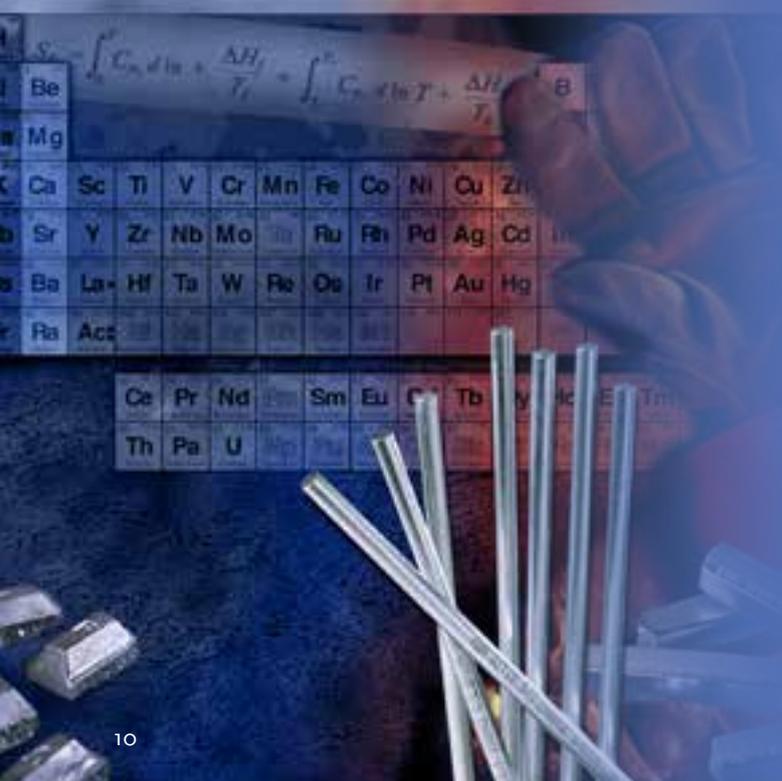
PARTNERSHIP IN RESEARCH AND DEVELOPMENT

Scientifically produced master alloys

You market a product of which your business partners, the end users and - not to be overlooked - the regulating bodies, make great demands. So it is reassuring to know that KBM Affilips is actively involved in the field of research and development. Our close cooperation with the Universities of Ghent (B), Leuven (B) and the University of Technology in Delft (NL) is an indication of our endeavour to establish the commercial applicability of new alloys on the basis of fundamental research. To further this end, we employ a close-knit team of in-house researchers. Their objective is to continuously improve existing processes and products, and to develop new products that are precisely designed to meet customer requirements. Our research department has the most advanced methods and means at its disposal, including wet chemical analysis, gas analysis and atomic absorption equipment, inductively coupled plasma and X-ray fluorescence spectrometers and electron microscopes.



Periodic Table of the Elements



PARTNERSHIP WITHOUT LIMITATIONS

Alloys perfectly suited to the reality of your market

Our continuing participation in international research programs, in cooperation with various industrial sectors, and in CEN and ISO Commissions for international standardisation, also bear witness to our commitment to tailor our alloys to the technical, environmental and economic circumstances governing your operations. To assist this type of research, we have established a pilot plant at our factory in Delfzijl (NL) in which we can test the feasibility of new concepts under appropriate conditions. This also enables us to develop efficient, computer-controlled production techniques, in which statistical methodology plays an important role. In doing business with KBM Affilips you have a partner that is familiar with advanced production technology.

A RESPONSIBLE PARTNER

Dynamic environmental policy also guarantees continuity

KBM Affilips is committed to the conservation of our living environment. This commitment is demonstrated by our ecological business policy introducing environmental management systems based upon the ISO 14001 standard. Our own environmental department has initiated numerous measures designed to eliminate harmful emissions and noise pollution, and we operate clean electrically powered induction furnaces, filtration plants and sealed cooling water systems. KBM Affilips is prepared for future environmental legislation. This means that we can guarantee the continuity of the products you require, both today and in the future.



Product range

Aluminium based master alloys

Aluminium-Antimony
Aluminium-Beryllium
Aluminium-Bismuth
Aluminium-Boron
Aluminium-Cadmium
Aluminium-Calcium
Aluminium-Cerium(MM)
Aluminium-Chromium
Aluminium-Cobalt
Aluminium-Copper
Aluminium-Copper-Phosphorus
Aluminium-Indium
Aluminium-Iron
Aluminium-Lanthanum
Aluminium-Lithium
Aluminium-Magnesium
Aluminium-Magnesium-Boron
Aluminium-Magnesium-Silicon
Aluminium-Manganese
Aluminium-Molybdenum
Aluminium-Nickel
Aluminium-Niobium (Columbium)
Aluminium-Scandium
Aluminium-Silicon
Aluminium-Silver
Aluminium-Strontium
Aluminium-Strontium-Titanium-Boron
Aluminium-Titanium
Aluminium-Titanium-Boron
Aluminium-Titanium-Carbon
Aluminium-Yttrium
Aluminium-Vanadium
Aluminium-Zinc
Aluminium-Zirconium
and others

Physical form: ingots, waffle plates, lumps, coiled rod, cut rod, conticast, splatter (flakes), tablets and briquettes.
*A **rod feeder** is also available.*

Copper based master alloys

Copper-Aluminium
Copper-Aluminium-Boron
Copper-Antimony
Copper-Arsenic
Copper-Bismuth
Copper-Boron
Copper-Cadmium
Copper-Calcium
Copper-Cerium(MM)
Copper-Chromium
Copper-Cobalt
Copper-Iron
Copper-Iron-Aluminium
Copper-Lithium
Copper-Magnesium
Copper-Manganese
Copper-Manganese-Iron
Copper-Manganese-Nickel
Copper-Manganese-Phosphorus
Copper-Manganese-Silicon
Copper-Nickel
Copper- Phosphorus
Copper-Silicon
Copper-Silver
Copper-Tellurium
Copper-Tin
Copper-Titanium
Copper-Vanadium
Copper-Zinc
Copper-Zirconium
and others

Physical form: ingots, waffle plates, lumps, powder, shot.

Additives for the iron, steel, and superalloy industries

Aluminium-Iron
Bismuth-Manganese
Cobalt-Boron
Cobalt-Chromium-Tungsten (Wolfram)
Cobalt-Molybdenum
Cobalt-Vanadium
Copper-Antimony
Copper-Arsenic
Iron-Niobium (Columbium) - nuclear grade
Iron-Silicon-Manganese-Aluminium
Iron-Titanium (Ferro-Titanium)
Iron-Titanium-Aluminium
Iron-Zirconium (Ferro-Zirconium)
Lead-Tellurium
Nickel-Aluminium
Nickel-Boron
Nickel-Calcium
Nickel-Chromium
Nickel-Hafnium
Nickel-Lanthanum
Nickel-Magnesium
Nickel-Manganese
Nickel-Molybdenum
Nickel-Niobium (Columbium)
Nickel-Phosphorus
Nickel-Tantalum
Nickel-Titanium
Nickel-Tungsten (Wolfram)
Nickel-Vanadium
Nickel-Zirconium
Tellurium-Manganese
Zirconium-Aluminium
Zirconium-Iron
and others

Physical form: ingots, plates, lumps, powder.

Nodularising alloys

Nickel-Magnesium
Nickel-Magnesium-Cerium(MM)
Nickel-Magnesium-Iron
Nickel-Magnesium-Iron-Cerium(MM)
Nickel-Magnesium-Iron-Silicon
Nickel-Magnesium-Iron-Silicon-Cerium(MM)
Copper-Magnesium
and others

Physical form: lumps of specified size, powder.

Lead based master alloys

Lead-Arsenic
Lead-Arsenic-Antimony
Lead-Bismuth
Lead-Calcium
Lead-Copper
Lead-Selenium
Lead-Tellurium
and others

Physical form: ingots.

Zinc based master alloys

Zinc-Aluminium
Zinc-Antimony
Zinc-Cobalt
Zinc-Copper-Titanium
Zinc-Iron
Zinc-Magnesium
Zinc-Manganese
Zinc-Nickel
Zinc-Tin
Zinc-Titanium
Zinc-Vanadium
and others

Physical form: waffle plates.

Partnership in alloys



Tienen/Belgium - plant



Delfzijl/The Netherlands - plant



Oss/The Netherlands - plant & sales office

A Partner you can count on

KBM Affilips is a decisive organisation with an extensive product range, operating worldwide. An organisation that also pays close attention to the personal aspects of cooperation. It is important to us that our customers can always reach their own personal contact within our organisation. In doing business with KBM Affilips, you are opting for a reliable partner.

Call us today for further information

This brochure presents an overall view of our back-ground, our product range and the exclusive level of customer service we provide. Naturally, you may have a few remaining questions. If you would like further or more detailed information, please do not hesitate to contact us today. Our staff will be glad to provide any information you require.



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